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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,511	12/28/2005	Bernd Clauberg	US030201	7969
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EXAMINER				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/562,511

Applicant(s)

CLAUBERG, BERND

Examiner

Ephrem Alemu

Art Unit

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-6 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-6 and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 5/19/2008
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the Applicant's amendment after final submitted on 05/19/2008. In virtue of this communication, claims 1, 3-6 and 8-10 are now pending in the instant application.

1. The Final rejection mailed on March 17, 2008 has been withdrawn.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colby (US 6,809,655) in view of Swanson (US 6,362,578).

Re claims 1 and 3-5, Colby discloses and teaches that it is known in the art to provide traffic light system comprising a traffic light (420) having a first to fifth LED circuits (i.e., 110A, 110B, 110C, 440, 450) that are selectively controlled by a single control module including electronics for the purpose of controlling the direction and flow of an incoming traffic at an intersection (Figs. 2B, 4B; Col. 1, lines 24- 30; Col. 1, line 48- Col. 2, line 4).

Although, Colby does not show the detailed structure of the first to fifth LED circuits (i.e., 110A, 110B, 110C, 440, 450) as claimed, such arrangement is well known and would have been easily incorporated by a person having ordinary skill in the art within the known traffic light system as taught by Colby for no other reason displaying a specific pattern of traffic light to control traffic at an intersection. Furthermore, one of ordinary skill in the art recognizes that the known single control module including electronics to operate in order to prevent simultaneous closure of the electronic switches associated with the first to fifth LED

circuits (i.e., 110A, 110B, 110C, 440, 450) would have been obvious for no other reason that controlling the direction and flow of traffic without giving conflicting lighting signals (Fig. 4).

In the same field of endeavor, Swanson discloses a first to third LED circuit; wherein each of the first to third LED circuit including a series connection of a first to third LED arrays (14, 16, 18), a first to third current limiters (30, 30, 30) and a first to third electronic switches (24, 26, 28) to the voltage source (B+); wherein the first, second and third LED circuits are connected in parallel for the purpose of providing illuminated signal having discrete functionality (Fig. 1; Col. 1, lines 38-47; Col. 3, lines 13-19; Col. 7, 12-19); and

Furthermore, Swanson discloses and teaches to provide a switch controller (i.e., PWM 38) operable to selectively open and close the first to third electronic switches (24, 26, 28), wherein the first to third current limiters (30, 30, 30) controls a flow of one of a first to third LED current from the voltage source (B+) through the first to third LED arrays (14, 16, 18) whenever the switch controller (i.e., PWM 38) selectively closes one of the first to third electronic switches (24, 26, 28), and wherein the flow of one of a first to third LED current from the voltage source (B+) through the first to third LED arrays (14, 16, 18) is impeded whenever the switch controller (i.e., PWM 38) selectively open one of the first to third electronic switches (24, 26, 28) for the purpose of controlling the first to third LED arrays (14, 16, 18) to have discrete functionality (Fig. 1; Col. 1, lines 34-47; Col. 3, lines 13-24; Col. 7, lines 12-19; Col. 1, lines 34-37).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify each of the first to fifth LED circuits (i.e., 110A, 110B,

110C, 440, 450) of Colby's traffic lighting system by incorporating a series connection of LED arrays, current limiter and a switch as taught by Swanson for the purpose of displaying distinguishable illuminated signal to control the direction and flow of traffic at an intersection.

4. Claims 6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colby (US 6,809,655) in view of Hutchison (US 2002/0175826).

Re claims 6 and 8, Colby discloses and teaches that it is known in the art to provide traffic light system comprising a traffic light (420) having a first to fifth LED circuits (i.e., 110A, 110B, 110C, 440, 450) that are selectively controlled by a single control module including electronics for the purpose of controlling direction and flow of an incoming traffic at an intersection (Figs. 2B, 4B; Col. 1, lines 24- 30; Col. 1, line 48- Col. 2, line 4).

Although, Colby does not show the detailed structure of the first to fifth LED circuits (i.e., 110A, 110B, 110C, 440, 450) as claimed, such arrangement is well known and would have been easily incorporated by a person having ordinary skill in the art within the known traffic light system as taught by Colby for no other reason displaying a specific pattern of traffic light to control traffic at an intersection. Furthermore, one of ordinary skill in the art recognizes that the known single control module including electronics to operate in order to prevent simultaneous closure of the electronic switches associated with the first to fifth LED circuits (i.e., 110A, 110B, 110C, 440, 450) would have been obvious for no other reason that controlling the direction and flow of traffic without giving conflicting lighting signals (Fig. 4).

In the same field of endeavor, Hutchison discloses a first, second and third LED

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circuits (i.e., LED strings 26, 28, 30) connected in series to the current source (i.e., voltage source 40), the first, second and third LED circuits (i.e., LED strings 26, 28, 30) including a parallel connection of a first, second and third LED arrays (i.e., LEDs within first, second and third strings 26, 28, 30) and a first, second and third electronic switches (Q9, Q8, Q15); and a switch controller (64) operable to selectively open and close each of the first, second and third electronic switches (Q9, Q8, Q15), wherein a first, second and third LED current flow from the current source (i.e., voltage source 40) through the first, second and third LED array (i.e., LEDs within string 26) whenever the switch controller (64) opens the first, second and third electronic switches (Q9, Q8, Q15), and wherein the flow of the first, second and third LED current from the current source (i.e., voltage source 40) through the first, second and third LED array (i.e., LEDs within strings 26, 28, 30) is impeded whenever the switch controller (64) closes the first, second and third electronic switches (Q9, Q8, Q15) (Figs. 3, 4a; paragraphs [0008], [0016], [0022], [0023]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify each of the first to fifth LED circuits (i.e., 110A, 110B, 110C, 440, 450) of Colby's traffic lighting system by incorporating an electronic switch in shunt with the LED arrays as taught by Hutchison for no other reason than displaying distinguishable illuminated signal to control the direction and flow of traffic at an intersection.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 3-6 and 8-10 have been considered but are moot in view of the new grounds of rejection.

6. Applicant's arguments with respect to Colby's patent filed 05/19/2008 have been fully considered but they are not persuasive.

Applicant's argument that Colby patent fails to disclose, teach, or suggest a traffic light wherein the switch controller (21) is further operable to prevent simultaneous closure of the first electronic switch (32) and the second electronic switch (42), as recited in independent claim 1, is respectfully disagreed.

As applicant noted, Colby patent discusses several traffic signal being supported by one or more supporting elements and coupled through a single control module including electronics (Col. 2, lines 1-4). Thus, one of ordinary skilled in the art would have recognized that the single control module including electronics being operable to prevent simultaneous closure of the electronic switches associated with the LED circuits of the Colby's modified by Swanson (Colby's modified by Hutchison) traffic lighting system would have been obvious for no other reason than displaying distinguishable illuminated signal to control the direction and flow of traffic at an intersection. Furthermore, applicant's own disclosure requires only a properly working switch controller for prevention of simultaneous closure of the electronic switches in order to avoid sending a conflicting signal (page 3, lines 21-23).

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EA
7/02/08

/Douglas W Owens/
Supervisory Patent Examiner, Art Unit 2821

